NEWSLINE

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Family Days

OPEN HOUSE

MAY 30-31, 2009

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A message from Director George Miller

It is my very great pleasure to welcome you to Lawrence Livermore National Laboratory's Family Days Open House for 2009.

This event provides a rare opportunity for us to showcase our Laboratory to our families and friends, tour some truly unique scientific and experimental facilities, and share our passion for the important work we do in service to the nation.

This year's open house is significant in that it is the last time the inner workings of the National Ignition Facility (NIF) will be open for viewing. In just a few weeks, NIF will begin the series of experiments that are expected to culminate in the first-ever demonstration of fusion ignition in the laboratory.

Although significant changes have occurred at the Laboratory and throughout the world since our last open house in September 2002, when we celebrated our 50th anniversary, our critical mission for the nation endures. Our unique capabilities and facilities enable us to tackle technical challenges that others regard as too hard. Our scientific discoveries are unlocking the mysteries of the universe, and our technologies are being used in real-life applications to make the world a safer place. All this is possible because of a staff of amazingly talented, skilled and dedicated employees.

As you tour the Laboratory, please "think safety." In particular, be alert to tripping hazards and, if the weather is hot, remember that the young and the elderly are particularly at risk for dehydration and heat stress. First aid stations are available (Bldg. 663 and the West Cafeteria), but an ounce of prevention is worth a pound of cure.

Thanks for coming to our Family Days Open House 2009. I hope you have a memorable and enjoyable visit.

George H. Miller

Laboratory Director

In case of an emergency... from a Lab phone, dial 911; from a cell phone, dial 925-447-6880.

Tips on escorting guests

An increased responsibility is placed on escorts/hosts to protect LLNL facilities and the sensitive work that occurs on site by informing, escorting and making a conscientious selection of the visitors they choose to bring to the Laboratory.

Everyone who comes to the Laboratory for Family Days Open House must have a valid badge for access to LLNL or be accompanied by an escort/host who does. Guests include family members and friends.

For this year's event, the Laboratory's current configuration of Property Protection Area and Limited Area designations will remain unchanged, and the following access control requirements will be followed:

• Uncleared individuals (P-cleared/gray badge) may visit the Laboratory and are permitted to escort/host up to a total of eight guests at a time in Property Protection Area facilities declared as "open" for the event. They may not visit the Limited Areas unless arrangements have been made to have them and their family and/or guests escorted/hosted by a Q- or L-badged individual.

• Q- and L-badged LLNL and DOE individuals may visit the Laboratory and are permitted to escort/host up to a total of eight guests at a time in Property Protection and Limited Area facilities declared as "open" for the event. Specific restrictions may be applied to individual areas designated as Q-only areas.

Remember to bring your badge and the yellow family guest form with you to the event. You may visit the Laboratory an unspecified number of times during the event and may escort up to eight guests each visit. Employees escorting foreign nationals must have previously submitted the blue foreign national guest form.

Geese: Visitors may come upon Canada geese that have settled on site. The geese can be aggressive, so keep at a safe distance and do not feed the geese.

No cell phones and other prohibited items

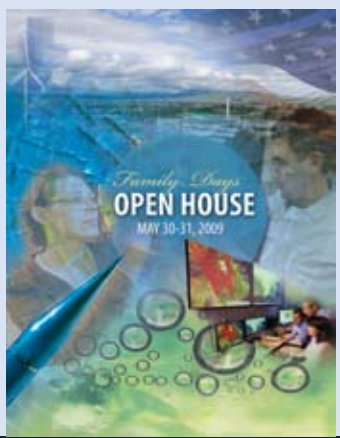
- No guests' cell phones. Only badged individuals (Lab employees, associates, consultants, LLNL badged contractors and badged government employees) will be allowed to bring government or personal cell phones or other electronics onto the site. Family members/guests must leave cell phones in their vehicle.

  The same limitations for cell phone use for badged individuals apply during Family Days Open House as on a normal workday: no use of the cell phone within a Limited Area facility, and no photography if the cell phone is camera-equipped.

- No personal computers (including personal digital assistants, Palm Pilots, Blackberries, etc.).
- No MP3 players or iPods. No hand-held games (including Nintendo DS, Sony PSP, etc.).
- No media and no USB memory devices.
- No bicycles.
- No weapons or explosives.
- No cameras, recorders or binoculars.
- No Illegal drugs or alcoholic beverages.
- No corrosive or toxic materials.

***Cover:* A photo collage of various technologies at the Laboratory.**

Julie Korhummel/Newsline



For parking locations, see the map on pages 4–5.

Programs offer something for everyone to see and do

Ted Ognibene analyzes data at the Lab's NEC 1-MV tandem accelerator at the Center for Accelerator Mass Spectrometry (CAMS). CAMS will be open in Bldg. 190, as described below.

Biosciences and Biotechnology Division

Bldg. 361 auditorium, room 1242 and windows into labs 1137, 1168, 1942

ACTIVITIES: BBTD will have a self-guided tour of multiple displays and photos describing research and the equipment and techniques utilized. Many hands-on activities, including isolating your own DNA, will be offered. Docents will be available to answer questions. Multiple windowed working laboratories will be open for viewing.

GENERAL INFO: The Biosciences and Biotechnology Division (BBTD) performs research in genome biology, computational biology, molecular toxicology, biochemical structures, assays, genetics, microbial systems and medical technology. The division works at the intersection of these areas using advances in nanotechnology, imaging and measurement science.

In partnership with the Global Security Principal Directorate (GS), BBTD scientists are on the front lines of the nation's biosecurity efforts. Key areas of contributions include: instrumentation to detect biothreat agents at low concentrations in the environment, rapid assays for the detection of disease, and development of new approaches in bioforensics.

BBTD scientists also are addressing other areas of cutting-edge biology, making significant contributions in the area of human health and issues important to bioenergy.

Researchers are using a systems biology approach to obtain an understanding of the energy metabolism of microbial communities. The work is accomplished by integrating biochemistry, thermodynamics, metabolite transport and utilization, metagenomic sequencing, regulatory and metabolic network analysis and comparative and evolutionary genomics. A team of BBTD researchers is applying molecular imaging techniques, nanotechnology and several forms of single cell/molecule spectroscopy to solve problems in life and material sciences. LLNL, working together with the Joint Genome Institute and others, is using new computational tools developed at LLNL for conducting genome comparisons and identifying and characterizing gene regulatory sequences.

Business and Nuclear Operations "The Environment and Wildlife"

Memorial Rose Garden, Bldg. 551, and Central Cafeteria promenade

ACTIVITIES: A series of posters that highlight contributions of the Business and Nuclear Operations departments will be on display. The Rose Garden will have a display of the wildlife at the Livermore Site and Site 300, plant life at the Livermore Site and Site 300, and posters about Lake Haussmann.

Center for Accelerator Mass Spectrometry

Bldg. 190

ACTIVITIES: Tours, posters and video presentations.

GENERAL INFO: Since its inception in 1987, LLNL's Center for Accelerator Mass Spectrometry (CAMS) has applied a wide range of isotopic and ion-beam analytical tools used in basic research and technology development to address a spectrum of scientific needs important to the Laboratory, the university community and the nation. AMS is frequently employed to determine the ratio of carbon-14 to carbon-12 for radiocarbon dating to determine the age of a material. Examples of items that have been radiocarbon dated at LLNL include ancient corals and marine samples from Loch Ness to determine whether it may have once been open to the sea.

Other isotopes in beryllium, aluminum and chlorine are used for exposure dating in geology. Accelerator mass spectrometry also is widely used in biomedical research.

CAMS hosts a 10-MV FN tandem Van de Graaff accelerator and a NEC 1-MV tandem accelerator to perform more than 25,000 AMS measurement operations per year, as well as a nuclear microprobe. CAMS activities contribute to LLNL programs in national security, climate change and biosecurity.

Director's Office

Bldg. 543 auditorium

ACTIVITIES: "Fun With Science" shows, "Science on the Weekend" talks and "Expanding Your Horizons" demonstrations. Shows are designed for kids and will run throughout the day, Saturday and Sunday (see schedule below).

"Fun With Science" shows offer an enjoyable, interactive peek into the natural laws of science through demonstration and explanation.

"Science on the Weekend" presentations feature science and technology research being carried out at the Lab, including discussion of the fundamentals behind the science as well as the application of that research to help solve national challenges.

"Expanding Your Horizons"
Crystal Forest" is a hands-on activity for children ages 6-12. Children can grow their own crystal tree and add it to our expanding crystal forest.

Saturday, May 30
10 a.m., Fun With Science; 10 a.m.–noon, Crystal Forest; 11 a.m., Science Talk: "Birth of the Solar System"; 1 p.m., Fun With Science; 2 p.m., Science Talk: "Comets"; 3 p.m., Fun With Science.

Sunday, May 31
10 a.m., Fun With Science; 10 a.m.–noon, Crystal Forest; 11 a.m., Science Talk: "Hydrogen Fuels"; 1 p.m., Fun With Science; 2 p.m., Science Talk: "Hydrogen Fuels."

Bldg. 111, fifth floor

The Edward Teller conference room, which is furnished and decorated with pictures and memorabilia from Teller's illustrious career, will be open to visitors. The offices of Director George Miller and Deputy Director Steve Liedle also will be open.

Discovery Center

Bldg. 651: Open Saturday and Sunday

GENERAL INFO: The Laboratory's Discovery Center provides visitors with a window into the Lab's state-of-the-art research programs, computational capabilities and experimental tools. Here you'll experience a broad-based display of science and technology, as well as highlights of the Laboratory's history. The Discovery Center is located off Greenville Road on Eastgate Drive.

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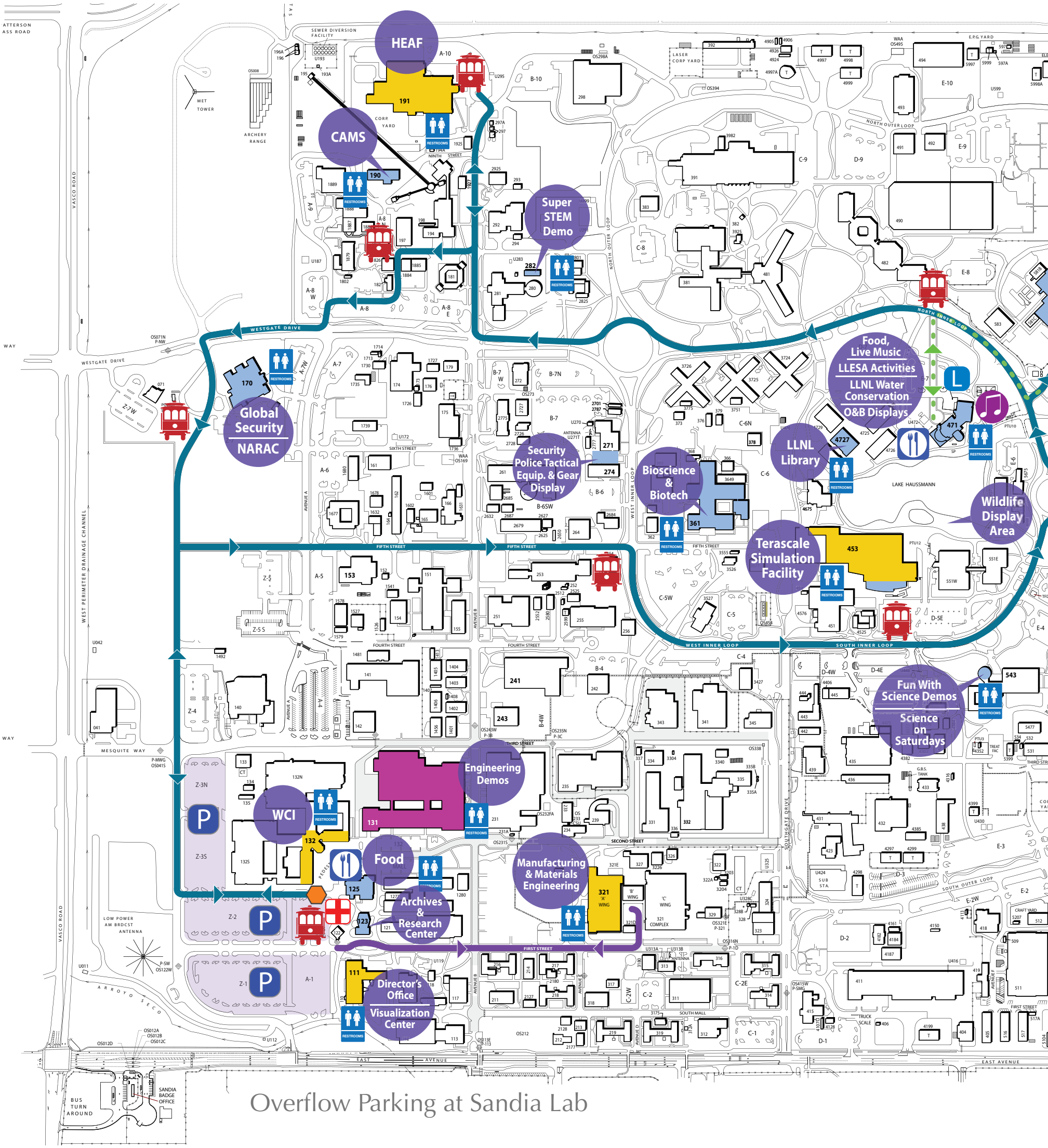
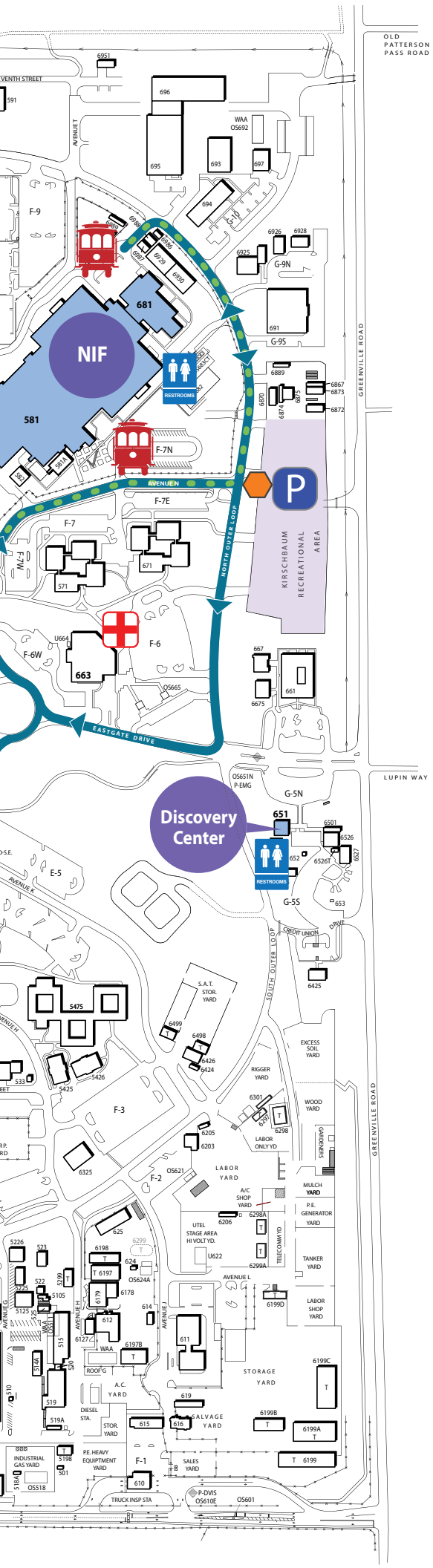
Map out your visit to Family Days at t



Overflow Parking at Sandia Lab

the Laboratory: May 30–31



Legend

- Main Shuttle Loop
- NIF Cafeteria Express Shuttle (both directions)
- First Street Shuttle (both directions)
- Areas of Interest - P Access
- Areas of Interest - L/Q Access Only
- Areas of Interest - Q Access Only
- Event Parking
- Shuttle stops, locations approximate
- Security Check-in
- Lost and Found @ Central Cafeteria
- First Aid
- Food
- Live Music @ Central Cafeteria
- Restrooms

Hours

Saturday, May 30: 9 a.m. to 5 p.m.
(Entrance gates close at 4 p.m.)

Sunday, May 31: 9 a.m. to 3 p.m.
(Entrance gates close at 2 p.m.)

West and Central Cafés:

Saturday, May 30

9 a.m. – 3 p.m.
(Pastries served from 9 a.m. – 11 a.m.
Lunch served from 11 a.m. – 3 p.m.)

Sunday, May 31

9 a.m. – 2 p.m.
(Pastries served from 9 a.m. –11 a.m.
Lunch served from 11 a.m. – 2 p.m.)

The Starbucks station located inside the cafés will be open the same duration as the cafés on Saturday and Sunday.

Discount coupons are available in the cafés.

Special accommodations

Parking: Handicap parking spaces will be available at the West Cafeteria and Kirschbaum Field parking lots for attendees with disabled placards or license plates.

For attendees who cannot walk long distances and do not have a disabled placard or license plate, a limited number of "easy access" parking spaces will be available on a first-come, first-served basis. Easy access parking passes must be requested in advance and will be mailed to the employee's L-code.

NOTE: You must have a disabled placard or license plate to park in a designated handicap space. Easy access parking passes cannot be used to park in a handicap parking space.

Wheelchair access: Family Day activities are wheelchair accessible. Shuttles with wheelchair lifts will be available on call to transport attendees from place to place along Inner Loop Road. To call a wheelchair accessible taxi on Family Days, call 2-TAXI or contact a Family Day shuttle stop volunteer. Please inform the dispatcher or volunteer that you will need a wheelchair accessible taxi and the number of persons in your party.

Wheelchair loan: Wheelchairs reserved in advance will be available for pick up on Family Days at the West Cafeteria and Kirschbaum Field badge check locations. A limited number of additional wheelchairs may be available for loan on a first-come, first-served basis.

Deaf interpreting services: Deaf interpreting services requested and confirmed in advance will be provided as scheduled. For questions, contact Maureen Morley at morley2@llnl.gov or 422-1770.

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Electron Microscope Demonstration

Bldg. 282

ACTIVITIES: View atoms live. An electron microscope, known as a SuperSTEM, magnifies objects millions of times, such that columns of atoms can be directly observed in real time. Observe how this capability is enabling new understanding of the nature and performance of man-made materials.

Engineering

Bldg. 131

Defense Technologies Engineering Division, Bldg. 131 Lobby 1st floor: On display will be an LLNL Independent Diagnostics Scoring System (LIDSS) Neutron Detector Raft, a MK21/W87 reentry vehicle and videos and posters describing elements of these mock warheads and diagnostic systems.

Defense Technologies Engineering Division, Bldg. 131, room 2107: Demonstration of the latest Pro-E software used for design and drafting. See how engineers digitally design systems before fabrication. Also on display are various project posters.

National Security Engineering Division, Bldg. 131, room 2504: Technology demonstrations, posters and video displays. The posters and video displays depict engineering solutions to the challenges facing the nation in national defense, homeland security, energy and environment and fundamental science. In addition, visitors can investigate how different the world appears when viewed in the long-wave infrared (LWIR). Using a compact bolometric camera to view themselves and ordinary items, visitors will learn about emissivity and differences in reflectivity between the infrared and visible wavelengths of light.

Bldg. 131, room 1553: Display of engineering's technical innovations, research accomplishments, solutions to scientific challenges, current work in progress, scientific prototypes and unique manufacturing techniques and capabilities.

Bldg. 131, room 1553: Video animation displays including: seismic analysis (including the Bay Bridge) and electromagnetic simulation, the Precision Robotic Assembly Machine and more.

Bldg. 321A

Technology Resources Engineering Division is hosting a tour of the largest fabricating machinery at the Laboratory. Capabilities include the ability to turn parts with diameters up to 77 inches by 67 inches long, mill parts as large as 96 inches wide by 72 inches tall to tolerances within 0.0005 of an inch. These facilities include equipment capable of performing all aspects of general machining ranging from parts the size of an automobile to as small as a human hair.

Also visit the electronic chassis and cable fabrication facility and the printed circuit board assembly facility. These facilities build electronic chassis and rack assemblies, power supplies, and cable terminations. See how devices — some as small as 0.5 millimeter — are soldered onto printed circuit boards using microscopes.

Global Security

Bldg. 170, exterior, courtyard, rooms 1091 and 1092

ACTIVITIES: Global Security invites Lab families and guests to enjoy posters, displays, monitors and video screens, high-tech machines, talks by scientists and operational science vehicles in and around Bldg. 170. These displays fall into three major areas of emphasis in three different information zones,* which are described below.

Making the World Safer from Chemical, Biological, Nuclear and Explosive Threats
– LLNL scientists discuss how they solve real crimes (10 a.m. and 2 p.m. Saturday; 10 a.m. Sunday), including how they solved the Angel of Death case.
– The Rad Truck* and RAP vehicle,* which are used by teams to find and identify radioactive materials.
– The Biothreat Response Vehicle,* Automated Pathogen Detection System, and BioBriefcase, technologies developed for detecting biological threats.
– Technology developed to find and characterize explosives.
– How the Lab responds to hazardous atmospheric releases, viewable from outside the NARAC Operations Room.

Technology For Protecting the Planet:
– The LLNL hydrogen car,* world-record holder for miles between fill-ups.
– LLNL's energy-flow diagrams, which show where energy is used in the United States.
– The wind-tunnel model used to make new, more aerodynamic vehicles.
– New energy sources, such as wind and biofuels.
– Recycled (pulverized) documents that show how LLNL recycles securely.

Innovating for Peace:
– Sleuthing for seismic signals across the world.
– Important cooperation with the international community.
– How our new radiation detectors advance nuclear energy security.
– How Sonoma is used to monitor human activity.
– How and why the Lab monitors power lines.
– The many ways the Lab fights against terrorism.
– "Security in space" interactive demo on a high-tech video screen shows how our work protects satellite infrastructure.

** All Global Security vehicles are on display in a fourth zone, outside Bldg. 170.*

Laboratory Archives

Bldg. 123

ACTIVITIES:
Historical movies
"Forward Area Nevada" (27 minutes, 1958), describes the 1957 Operation Plumbbob at the Nevada Test Site. Beginning with a description of the Test Site and Camp Mercury, the film shows preparations, testing and data collection for tower, tunnel and balloon shots, including the Rainier event, the first contained underground nuclear test.

"Dominic Remembered" (26 minutes, 1960s), shows highlights of the Dominic test series that began in 1962 in response to the Soviet Union breaching the testing moratorium that had been in place since 1958. The tests were conducted near Christmas Island Atoll in the Pacific and were the last atmospheric nuclear

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A poster describing the uses of biofuels will be on display at Global Security in Bldg. 170.

Historical movie schedule for Saturday in Bldg. 123		
Film	**Time**	**Length**
Forward Area Nevada, 1958	9:30 a.m., 1 p.m., 2:45 p.m.	26 minutes
Dominic Remembered, 1960s	10:15 a.m., 1:45 p.m., 3:30 p.m.	27 minutes
Magnificent Obsession: The Life of Edward Teller, 1991	11 a.m. 2:30 p.m., 4:15 p.m.	28 minutes
Atoms Old and New: The Life and Times of Ernest Orlando Lawrence, 1982	11:45 a.m.	67 minutes
Historical movie schedule for Sunday in Bldg. 123		
Forward Area Nevada, 1958	9:30 a.m., 1 p.m.	26 minutes
Dominic Remembered, 1960s	10:15 a.m., 1:45 p.m.	27 minutes
Magnificent Obsession: The Life of Edward Teller, 1991	11 a.m., 2:30 p.m.	28 minutes
Atoms Old and New: The Life and Times of Ernest Orlando Lawrence, 1982	11:45 a.m.	67 minutes

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tests, held just prior to the ratification of the Limited Nuclear Test Ban treaty signed in October 1963.

"Atoms Old and New: The Life and Times of Ernest Orlando Lawrence" (67 minutes, 1982), produced by Livermore's award winning film maker, Ray Jaeger, traces the life of Ernest Lawrence from his childhood, to his education, to the founding of Lawrence Livermore National Laboratory. The film includes interviews with former Lab directors Herb York, Edward Teller, Harold Brown and John Foster as well as Glenn Seaborg, Edwin McMillan, and others and Lawrence's wife, Molly, and brother, John.

"Magnificent Obsession: The Life of Edward Teller" (28 minutes, 1991), traces Teller's early years, education and scientific and political contributions. The film includes historical photographs, archival film footage and an interview with Teller.

Exhibits of historical photographs and objects: Family members can interview each other about their life at the Lab. Recording equipment will be available.

Livermore Lab Employee Services Association (LLESA)

Central Cafeteria parking lot area

ACTIVITIES: Children's activities, give-aways of SPF-15 sunblock pocket packs, selection of Lab logo items available for purchase, free drawing for items donated by various companies that interact with LLESA and information and tickets for purchase to the annual family picnic to be held June 6 at Discovery Kingdom in Vallejo.

National Atmospheric Release Advisory Center

Bldg. 170, room 1018 hallway

ACTIVITIES: NARAC will have posters and computer displays viewable from outside the NARAC Operations Room (room 1018) in Bldg. 170. The operations room will be viewable through large windows.

GENERAL INFO: The National Atmospheric Release Advisory Center (NARAC) is an internationally known facility that provides near-real-time computer modeling of natural, accidental or intentional atmospheric releases such as from a volcanic eruption, industrial accident or terrorist attack. NARAC uses real-time access to global meteorological data sources to produce three-dimensional atmospheric plume model predictions in minutes, in time for an emergency manager to decide if taking protective action is necessary to ensure the health and safety of people in the affected areas. NARAC predictions have been used to help understand the impacts of nuclear accidents, such as at Three Mile Island and Chernobyl, as well as industrial chemical spills and fires.

National Ignition Facility

Bldg. 581

ACTIVITIES: NIF will conduct tours of the facility that include a new route staffed by docents and displays, photos and activities for children of all ages. In the plaza, there will be posters, NIF group photos and photos taken with NIFFY. Tours will end at 4 p.m. on Saturday and at 2 p.m. on Sunday.

GENERAL INFO: The National Ignition Facility (NIF), the world's largest and highest-energy laser system, is now operational. With a goal of achieving controlled thermonuclear ignition and burn — nuclear fusion — for the first time in a laboratory, NIF will usher in a new age of science, giving researchers access to temperatures and pressures that exist only in the cores of stars and giant planets and in nuclear weapons. In addition to helping maintain the safety and reliability of the nation's nuclear weapons stockpile without the need for underground testing, NIF will lay the groundwork for harnessing the clean, limitless potential of fusion energy and will yield new insights into the origins and workings of the cosmos.

Operations and Business

Trailer 4727: Library

ACTIVITIES: Demonstrations of the library's publicly available external documents online database.

GENERAL INFO: The LLNL library is a world-class library dedicated to providing current scientific information to Laboratory researchers to enhance their research experience. The library has more than 95,000 electronic reports, 153,842 bound journal volumes, 23,000 electronic journals and conference proceedings, 14,000 electronic books, and 64 electronic databases available to Laboratory scientists and engineers. The library also has more than 35,000 electronic reports available to the public.

Security Police Tactical Equipment and Gear

Near Bldgs. 271 and 274

ACTIVITIES: Security Police Officers with the Security Organization's Protective Force Division will display tactical equipment and gear and will provide information about the protection of the Laboratory and its unique facilities.

Strategic Human Resources Management

Central Cafeteria parking lot area

ACTIVITIES: Informational booth will display the array of services and benefits Strategic Human Resources Management provides to Laboratory employees and their families. Information will be available about worklife services, student programs, employment opportunities and more.

Concern/Employee Assistance Program (EAP), the Laboratory's external employee assistance program, will be available to answer questions and to offer assistance to employees and their families.

Come by and pick up a "Lab" kit complete with stickers, planet "tattoos" and give-aways for kids

Terascale Simulation Facility

Bldg. 453

ACTIVITIES: Computation will offer self-guided tours (including posters and handouts) of both the computer rooms and the mechanical utility room. Tours will begin at 10 a.m. both Saturday and Sunday, and end at 3:30 p.m. on Saturday and at 1:30 p.m. on Sunday. This tour requires escorts to be either L- or Q-cleared and is handicap accessible.

On the way into the building, visitors may view the Armadillo Room theater's Power Wall screen, on which simulation results and videos about high-

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Posters and computer displays of the National Atmospheric Release Advisory Center will be available in Bldg. 170, room 1018 hallway.

The Terascale Simulation Facility will offer self-guided tours during Family Days.

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performance computing will be shown. Tux the penguin, the Linux mascot, also may make an appearance sledding down mountains as part of the Tux Racer game. The Power Wall is an eight-projector video wall with a resolution of 5120-by-2048 pixels.

GENERAL INFO: The Terascale Simulation Facility (TSF) is home to some of the world's fastest supercomputers. These currently include BlueGene/L, 596 TeraFLOP/s or TF (trillion floating operations per second) system, which was ranked as the fastest supercomputer in the world for 3 1/2 years until it was surpassed in June 2008, and Purple (96 TF), which is the NNSA's first national user facility system for tri-laboratory stockpile stewardship efforts. Also housed in the TSF is Dawn (501 TF), which was just recently delivered as part of the Sequoia contract that will eventually result in a 20-petaFLOP/s (20 quadrillion floating operations per second) system being delivered to LLNL in 2011 to serve as an NNSA user facility, and is expected to be one of the fastest supercomputers in the world. These machines support the Advanced Simulation and Computing (ASC) Program, a part of the DOE's National Nuclear Security Administration and an important component of stockpile stewardship.

The supercomputers reside in two computer rooms dominating the second level of the TSF. Located on the ground floor beneath each computer room is a mechanical utility room. A total of 30 air-handling units blow cool air up to the second level, each at a rate of 80,000 cubic feet per minute for a total 2.4 million cubic feet per minute.

Weapons and Complex Integration

Bldg. 111, AX Division

ACTIVITIES: The AX Division visualization center is used to explore the results of large computer simulations. The center is located next to the loading dock at the south end of the first floor of Bldg. 111.

There will be displays of a number of visualizations and movies created by AX Division/WCI scientists on a screen in the visualization center. They include simulations of NIF experiments, hydrodynamic experiments and other areas worked on by AX scientists. There also will be a few favorite visualizations from outside AX Division.

Posters explaining some of the simulations will be on display in the hallway and AX Division scientists will be present to answer questions.

Bldg. 132N lobby and courtyard

ACTIVITIES: Enjoy a series of displays in the front courtyard and lobby of Bldg. 132N. Models of various U.S. weapons, including the World War II-era nuclear devices "Fat Man" and "Little Boy," will be arranged in the courtyard.

The lobby area will feature a high-speed camera demonstration. High-speed cameras provide diagnostics of some of the Lab's most complex experiments. There will be a demonstration by filming normal, everyday movements (bouncing a ball, blowing bubbles, jumping, etc.). Images will be played back in slow motion.

A display on loan to the Lab from the UK commemorates the history of key events and accomplishments in the 50 years of US/UK collaboration. The 1958 Mutual Defense Agreement on Atomic Weapons is the basis for United States collaboration with the United Kingdom on nuclear weapons issues. Last year marked the 50th anniversary of this agreement. Recently, the US/UK relationship was reaffirmed by the signing of a new Statutory Determination under the Mutual Defense Agreement by Secretary Robert Gates and Secretary of Energy Samuel Bodman. This Statutory Determination strengthens the US/UK partnership in sustaining nuclear deterrence by enhancing the abilities of the two countries to collaborate in science and technology.

In addition to a poster display showing 57 years of the weapons program, there will be displays from current program elements, including A and B Programs, test facilities at Site 300 and Nevada, and Advanced Simulation and Computing (ASC).

High Explosives Applications Facility

Bldg. 191

ACTIVITIES: The High Explosives Applications Facility (HEAF) is a state-of-the-art explosives research facility that contains a wide variety of experimental capabilities. HEAF will be open for self-guided tours of the explosives R&D area. Tours will end at 4 p.m. on Saturday and 2 p.m. on Sunday.

Posters and displays will discuss the development, manufacture and testing of high explosives and other energetic materials.

Visitors will see several large explosive containment tanks within which detonation experiments are conducted. These massive structures are computer-controlled and hydraulically operated tanks where up to 10 kilograms (22 pounds) of explosives can be safely tested. This year marks HEAF's 20th anniversary as well as NNSA's recent designation as a "Center of Excellence for High Explosives R&D."

Additional prohibited items at HEAF: matches, flame and spark producing devices. There are no outside storage locations for prohibited items.

The hydrogen-powered car will be on display outside Bldg. 170.